

UC DAVIS REPORT TO THE ITLC

SEPT. 20-21, 2005

CAMPUSWIDE TECHNOLOGY HIGHLIGHTS

Through a number of collaborative initiatives, both on and off campus, UC Davis is pursuing new ways of developing and supporting new business applications, collaborative research programs, and flexible educational technology resources. To guide these improvements, three main information technology priorities were identified in Spring 2005 and actively pursued this summer:

- Increase standardization and enterprise delivery of IT solutions. Includes providing enterprise-level Active Directory and Exchange services; integrating Data Warehouse and PPS Decision Support Teams.
- Develop the campus educational technology infrastructure and programs. Includes implementing comprehensive learning management software programs, Faculty Merit and Promotion System, and e-portfolios. A proposal to form a new UC Davis Center for Educational Technology is being developed. This center will be dedicated to the pursuit and application of technology in support of instruction.
- Implement research infrastructure processes and programs. Includes further development of the Electronic Research Administration application (InfoEd) and e-health application (eVelos) as well as the proposed formation of the UC Davis Center for Computational Studies. This center will be dedicated to providing support to researchers in the area of computer clusters and associated applications.

Updates on key UC Davis collaborative initiatives in support of these IT and campus priorities:

Learning Management System. Working with the Schools of Medicine and Veterinary Medicine, IET is coordinating a campus initiative to implement several modules developed through the Sakai consortium. Last Spring, a subcommittee of the Campus Council for Information Technology prepared recommendations to guide the implementation of the next generation of course management tools at UC Davis. Included in this effort were consultations with other campuses (e.g., Indiana University, Stanford, and UC Berkeley). The report, recommending the campus pursue Sakai as the foundation for a new learning management system, was submitted in mid-June (see <http://ccfit.ucdavis.edu>). In related developments, pilot projects with select courses are on track to be launched in Fall 2005 (School of Medicine) and in Spring 2006 (Veterinary Medicine). A consultant was recently hired to help formulate a transition approach, in anticipation for a campus roll-out.

Faculty Merit and Promotion System. Headed by Academic Personnel, this project proposes to create faculty digital portfolios that can be used in support of the academic merit and promotion processes, as well as other processes. The implementation workgroup was formed in 2004, and a pilot was conducted with the College of Agricultural and Environmental Sciences and the Division of Biological Sciences. In early September, in preparation for a broader deployment, the MyInfoVault program, initially developed by the UC Davis School of Medicine, was transferred from the UC Davis Health System servers to campus servers, and users were prompted to create a Kerberos password, if they didn't already have one. A new MyInfoVault Web site featuring a new look and feel was rolled out as part of this transition (<http://myinfovault.ucdavis.edu>).

Electronic Research Administration (ERA). Sponsored by the Office of Research with support from IET, this initiative has been structured as a multi-stage project. It will ultimately enable electronic submission, review, approval, and tracking of research grant proposals. The first phase, to replace the existing campus Contracts and Grants database maintained by the Sponsored Programs Office with the new Proposal Tracking module, has been launched. Other recent highlights include the formation of an oversight committee (with representation from faculty and administration), the initial conversion of legacy data from the Contract & Grant database into the new InfoEd system, and the close collaboration with schools and colleges to replace their shadow systems. An organizational database was developed with hierarchical data on departments and people associated with the departments. (In future phases, this database will include roles and permissions or privileges associated with people, including permissions to grant vacations, purchase specific equipment, approve temporary affiliation status to visiting scholars, make changes to network settings, and delegate privileges to other faculty and staff.) Anticipated timeline: Proposal Tracking (Jan. 06); Proposal Development (2007); Project Management (2008).

Effort Reporting. Under the leadership of the Office of Administration, UC Davis has entered into a collaborative partnership with the Office of the President and several other campuses. The primary goal of this initiative is to improve and replace the current paper-based effort reporting process.

Centralized Active Directory and Exchange Services. IET is working with the Office of Administration (OOA) to consolidate their existing decentralized Microsoft Exchange servers into a centralized service provided through the campus Data Center. A total of approximately 1,400 staff, representing eight departments, are involved in this transition. Campus Events and the Vice Chancellor's Office are the first two departments to migrate to the centralized services. It is anticipated that remaining OOA departments will have migrated within the next six

months. In addition, the Office of Research, the Office of the Vice Chancellor of Student Affairs, and the Office of Resource Management and Planning have established accounts in the centralized Exchange 2003 service offered by IET, through a collaborative effort with the Office of Administration. An active Blackberry service is in operation, and a fax service is planned for the next month (see <http://windows.ucdavis.edu>).

Human Resources Systems: Three projects are underway in the Office of Human Resources.

PeopleAdmin. The PeopleAdmin online recruitment project has entered the configuration phase. Once completed, the system will enable applicants to seek career staff or temporary employment at UC Davis through online application submittal, account management, and application status updates. The system will also provide a next generation HR application to campus departments seeking to fill staff or temporary employment vacancies, as well as online compensation and classification review.

Temporary Employment Services. The system used to capture, monitor, and report on temporary employee time and recharge information is under review. While a portion of the current system's functionality will be moved to PeopleAdmin (online application and interdepartmental job request forms), the time tracking, alerting, and financial reporting will be re-engineered within a new system to improve operability and to reduce the number of manual processes. Several options will be presented to the oversight committee.

Enrollment and Tracking System. Staff Development & Professional Services is investigating systems capable of supporting online enrollment and tracking of instructor-led staff development courses and certification programs. This project is intended to improve ease-of-use by learners and reduce the department's dependency on manual data entry, manipulation and report generation. The RFP was released on July 21. Anticipated system roll-out date: Sept. 2006.

COMPUTING AND NETWORK SECURITY HIGHLIGHTS

UC Davis Cyber-Safety Program. Last Spring, the campus adopted a comprehensive "Cyber-Safety Program" that defines both responsibilities and 14 key practices for assuring the integrity, availability and confidentiality of UC Davis computing systems and electronic data. The program also requires annual reporting of campus units' progress towards implementing the recommended security measures (see security.ucdavis.edu/cybersafety.cfm). This summer, academic and administrative departments completed the first phase of the Cyber-Safety Program when they identified the individuals who will lead the security assessments in their respective organizations, as well as the projected dates by which they expect to complete their assessments. The first reports are due Oct. 1.

Authenticated SMTP. In late June, a new option became available for campus members who use a laptop both on and off campus, rely on different ISPs, or use an ISP or wireless service with no outgoing email server. This new service, "Authenticated SMTP", allows users to send email to any address over the campus email servers and typically requires only a quick change in users' email settings (http://security.ucdavis.edu/mail_relay.cfm).

Spam Filtering. In mid-July, the campus spam filtering and scoring system was further enhanced with the integration of a real-time blocking list to block mail from known spammers; Distributed Checksum Clearinghouse for better bulk email detection; and Bayesian filtering, which allows the system to learn from both spam and legitimate email to become more efficient at filtering. In addition, in late July, IET rolled out a mechanism to temporarily quarantine high-scoring email messages. The highest scoring messages are now automatically delivered to UCD-quarantine folders, then deleted after 28 days. This measure is part of an investigation to determine the feasibility of deleting these messages, thereby reducing the workload on the campus email servers to inspect (for viruses), deliver and store undesirable messages (see <http://security.ucdavis.edu/spam.cfm>).

Vulnerability Scanning Service. On August 8, the UC Davis Vulnerability Scanning and Remediation System received the Larry L. Sautter Golden Award for Best IT Practices in Business Processes and Services. The award was announced at the UC Computing Services Conference (<http://www.ucop.edu/irc/itlc/sautter/>). In late August, an intrusion detection system (IDS) was integrated into the existing system. This network-based IDS collects, filters, and analyzes traffic that passes through a specific network location. Used in conjunction with data collected by the VLAN scans and honeypot, the data collected by the IDS provides a broad view of threats to the campus computing network. In addition to providing more valuable data, the expanded system provides improved investigative and recovery resources for system administrators. Additional ongoing improvements include strengthening the vulnerability scanning mechanisms used for ResNet, the high-speed residence hall network (the team is investigating the use of CleanAccess). See http://security.ucdavis.edu/vuln_resources.cfm.

IT Security Symposium. Over 200 registrants from UC campuses, Office of the President, local schools, universities and the City of Davis participated in the 2005 IT Security Symposium, on June 22-24. Nearly 30 unique lab and lecture sessions were offered, several of which reached enrollment capacity during the first two

weeks of the registration period. Nearly all participants deemed this event a tremendous success, many reporting that they found "lectures/panels to be excellent and informative overall." Planning for the 2007 edition is expected to begin in late 2006 (see <http://itsecuritysymposium.ucdavis.edu> for keynote address, session materials, etc.).

Internet Tools. The 2005-06 edition of the UC Davis Internet Tools CD is expected to be available by September 24 (the first day of dorm move-in weekend). The CD will provide anti-virus (on the student version only), anti-adware, and anti-spyware utilities, among other software. It will be distributed free-of-charge to campus clients. After the initial run for move-in weekend, the CD will be manufactured locally so that the software can be updated as needed to ensure the latest versions are distributed (see <http://online.ucdavis.edu>).

Security Web Site Revamp. This summer, the UC Davis Computer and Network Security Web site underwent an extreme makeover. The new site is built around, and emphasizes, the new Cyber-Safety Program as well as education and training resources for users of all levels. Usability testing conducted in August with technical- and lay-user groups helped guide the improvements made to the site (see <http://security.ucdavis.edu>).

USER ACCESS AND SUPPORT HIGHLIGHTS

Help Desk/Remedy. The campus computing help desk (IT Express) recently reported significant improvements in the quality of the support provided to campus users. In addition to increased business hours (10 more hours weekly), the unit has implemented higher service level goals for telephone and email support requests. As of July, the average telephone response time was less than 15 seconds (compared to ~ 20 minutes a couple of years ago), and 90% of email inquiries were being answered within 1 business hour (vs. ~ 72 hours). In addition, the help desk is now using Remedy to track client support requests, thereby enabling consultants to enter a trouble ticket, route it, and monitor it through its resolution. A standardized methodology for reviewing and using feedback from users of the MyUCDavis portal will soon be integrated with the Remedy trouble-ticket tracking system. Further plans include enabling campus members to create, enter, and track their own tickets directly into a Web-based Remedy interface. Banner users will be the first group to use this feature (Winter 06).

Temporary Affiliate Form. This fall, a new application will allow visiting scholars and other temporary affiliates to apply online for a UC Davis login and other permission to use computing and library resources. Current practice of sending visiting scholars to several departments for approval of a paper-based document will be automated, including approvals from sponsors and departmental chairs. This application is built in partnership with the Library, which will be able to provide library privileges to visiting scholars much faster. Future enhancements include enabling the Office of Administration to issue visitors' ID cards using information from this application.

Lifetime Email Forwarding. Work continues on a lifetime email forwarding service for UC Davis affiliates. With this service, faculty, students, staff and other campus affiliates will have the option of retaining their "ucdavis.edu" email addresses for as long as they desire. Rather than being discontinued upon separation from the university, these addresses will remain active, and email sent to them will be automatically forwarded to another email account of their designation (typically an external ISP).

TELECOMMUNICATIONS & NETWORKING HIGHLIGHTS

Wireless Enhancements. A partnership was formed late last Spring between IET and ASUCD to expand on-campus wireless coverage by Fall 2005. ASUCD provided funding to install 12 new access points that will be strategically placed so as to improve coverage throughout the first and second floors of the MU as well the outside the MU and by the Quad, areas that are heavily frequented by students, faculty and staff. In addition, following a successful pilot with the Law School, IET implemented a Bluesocket wireless gateway and an Airwave access point (AP) management system over the summer. A new, secure guest wireless access service model is expected to be available this Fall. This service will eliminate the requirement for MAC address registration on the campus MoobileNet wireless network. Valid for a limited period of time (~a week at a time), guest permits will be issued through a sponsoring staff or faculty member (<http://wireless.ucdavis.edu>).

Firewall Services. Two Netscreen 5400 and one Netscreen 5200 firewall systems have been installed on the border routers (entrance and exit points) to and from the campus network. Rulesets will be implemented on these firewalls to protect campus computers from network traffic that crosses the campus entrance and exit points. Netscreen IDF level firewalls are now available for purchase from a blanket contract (at a 35% discount). Firewall training for system administrators and other technical staff is scheduled at the end of September. IET staff were trained in July and are available to provide support to campus units (<http://security.ucdavis.edu/firewalls.cfm>).

Campus Long Range Development Plan. A 2005 UC Davis Campus Planning Map depicting all known projects scheduled for completion through 2015 has been overlaid on the telecommunications facilities maps to identify conflicts with the existing infrastructure and determine the cable serving arrangements for proposed buildings. Solutions for mitigating conflicting field conditions are being proposed and documented. Estimated growth for the voice and data networks will be calculated and included in the plan. This information will provide a valuable tool in identifying impacts to overall project budgets when various project components change. The final document will be published in early 2006 and will be distributed to the Architects and Engineers and the Office of Resource Management and Planning as a supplement to the Campus 10-Year Capital Plan.

Strategic Telecommunications Planning. Western Telecommunication Consulting has been working with IET to formulate a technology strategy for the development and deployment of network systems over the next decade. Primary research to develop a framework of what a model Research 1 institution's technology landscape would look like includes areas such as VoIP, unified messaging, wireless network deployment, network security, emerging technology trends, video services, remote network access, network management, and budget. The outcome of this research has been a compilation of technology attributes, which together make up the "model" R-1 institution. The importance to the campus of each technology implementation is being defined. Different scenarios will be developed, and a strategy will be recommended for UC Davis.

Carrier Services RFP. A committee is reviewing responses to an RFP for outbound interstate, intrastate, international, operator-assisted, and directory assistance services from campus PBX (Private Branch Exchange) and Centrex locations; as well as calling card, toll-free inbound and outbound, and teleconferencing services. Four major long distance carriers responded, as did one for conferencing services only, and one for calling card services only. Anticipated timeline: top finalists selected in Oct.; contracts and services operational by Jan. 06.

Cellular Site RFP. IET and Real Estate Services issued an RFP for central campus cell sites to improve cellular coverage on campus from multiple carriers. Nearly every nationwide cellular provider submitted a bid. A campus committee is evaluating the responses for technical/physical feasibility. After the sites have been approved, contract negotiations for the site license will begin. Anticipated timeline: cell carriers will submit formal proposals by the end of Oct.; agreements should be concluded by late Nov.; construction planning should begin in Jan. 06.

ADMINISTRATIVE COMPUTING HIGHLIGHTS

PPS Decision Support. Departments' access to payroll expense and graduate student employee data has improved. Departments originally could access payroll expenses only for their own funds, blocking them from viewing a shared employee's complete expenses. Now a department can view all of their employees' payroll expenses through the PPS Decision Support Distribution of Expense report or straight from the PPS Data Warehouse. In addition, working with the PPS Security Committee and Graduate Studies, access to Graduate Student data across divisions will soon be opened to key college/division personnel in the PPS Data Warehouse. Other system improvements: Addition of a PI eligibility indicator in support of data feeds to the ERA Project and the ability to create custom DS reports limited to specific campus populations (<http://payweb.ucdavis.edu>).

Data Warehouse. Consulting meetings with key central administration and student affairs offices have identified several enhancements for the Campus Data Warehouse and SIS Decision Support system. Additional meetings are being scheduled in early Fall 2005 with deans' office contacts to identify improvements supporting their business needs. The preliminary design has been developed for creating a Usercode Management System which will speed up the application processing time, automatically establish the system access with email notifications, and track access (including identifying when accounts are no longer valid).

Student E-Bill. IET has supported the implementation of TouchNet for use by Student Aid Accounting in collecting student fees. The E-Bill process eliminates the need to create and mail thousands of student bills each month. TouchNet allows the university to display the student bill on a secure Web site and allows the student or guardian to pay the bill by way of WebCheck (Electronic Funds Transfer).

Banner Upgrade. The SIS Banner system is required to upgrade to version 7 by December 2006. The impact analysis of this effort is progressing, and a tentative timeline and resource plan have been developed. In late September, presentations will be available; user testing will start in May (<http://sis.ucdavis.edu/future.htm>).